Dental caries, the most common chronic disease of childhood, can be prevented by providing early guidance to caregivers. Children need a dental home and first comprehensive oral/dental health exam by the age 1 year.

Early Childhood Caries (ECC) is an aggressive form of dental caries in children under age 6. Its most severe form is a rapidly progressing process that can have lifelong effects. Early lesions present as a white spot on a tooth surface. Untreated, it may progress to cavitation or involve the nerve, causing an abscess or facial cellulitis.

**ASSESSMENT**


**CARIES RISK LEVELS**

Consider all of these factors when establishing patient’s overall risk for dental caries:

<table>
<thead>
<tr>
<th>High Risk</th>
<th>Moderate Risk</th>
<th>Low Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary caregiver has: dental caries, lifetime of poverty, low health literacy</td>
<td>Child or family is a recent immigrant</td>
<td>Child gets fluoridated water/supplements</td>
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<tr>
<td>Child receives 3+ between-meal, sugary snacks or beverages</td>
<td>Child has special health care needs</td>
<td>Childbrushes 2x/day with fluoride toothpaste</td>
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<tr>
<td>Presence of white spot lesions, or decayed, filled or missing teeth</td>
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<td>Child gets topical fluoride</td>
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<td></td>
<td></td>
<td>from a health professional</td>
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<td></td>
<td></td>
<td>Child has a dental home and receives regular</td>
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<tr>
<td></td>
<td></td>
<td>dental care</td>
</tr>
</tbody>
</table>

**WHEN TO REFER**

- If child does not have a dental home, refer to Cincinnati Children’s Dentistry.
- If child has visible caries, refer to Cincinnati Children’s Dentistry.
- If child has facial swelling or systemic signs (such as fever, swelling, redness, not eating or drinking), consider referral to Cincinnati Children’s Emergency for medical management.

**MANAGEMENT/TREATMENT**

After you determine the risk for caries, recommend:

- Brushing 2x/day with fluoride toothpaste, with help/supervision
  - Child age <3 years — use rice-sized amount of toothpaste
  - Child age 3+ — use pea-sized amount of toothpaste
- Floss, once there are no spaces between teeth
- No milk or sugary beverages in bottle at bedtime
- Less than 4 – 6 ounces of juice per day at one meal, no juice between meals
- If child is high risk, consider fluoride varnish
- Consider antibiotics if abscess is present and is not visibly draining
- Educate on how cavities form, importance of a dental home and dental care/treatment, and how to watch for signs of infection
- Consider referral to Cincinnati Children’s ED if facial swelling/cellulitis present

If you have clinical questions about patients with dental caries, email dentalcustomerconnection@cchmc.org.

If you would like additional copies of this tool, or would like more information, please contact the Physician Outreach and Engagement team at Cincinnati Children’s.

**FAST FACTS**

- **1 year**
  - Age by which all children should have their first dental visit

- **28%**
  - Of children will have had dental caries before kindergarten

- **10%**
  - Of children with Early Childhood Caries (ECC) suffer in pain

- **34 million**
  - Hours of school missed by US children due to dental problems

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**Additional Information**

Tool developed by Cincinnati Children’s physician-hospital organization (known as Tri-State Child Health Services, Inc.) and staff in the James M. Anderson Center for Health Systems Excellence. Developed using expert consensus and informed by Best Evidence Statements, Care Practice Guidelines, and other evidence-based documents as available. For Evidence-Based Care Guidelines and references, see www.cincinnatichildrens.org/evidence.
Dental Caries

**Patient Presents**
for visit with primary care provider / pediatrician

Complete clinical exam and caries risk assessment

### Social/Biological Factors
- Primary caregiver has dental caries
- Primary caregiver has a lifetime of poverty, low health literacy
- Child has >3 times per day exposures to between-meal sugar containing snacks or beverages
- Child uses a bottle or non-spill cup containing sugar-sweetened beverages between meals or at bedtime/night

### Clinical Factors
- White spot lesions, cavitated lesions, or filled/or missing teeth

### Protective Factors
- Use of a toothpaste with fluoride
- Exposure to optimal levels of fluoride
- Establishment of a dental home, and regular dental care

#### High Risk
**Active Infection/Caries**
- **Yes**
  - Dental Home?
    - **No**
      - Refer to pediatric dentist
      - Apply fluoride varnish
      - Reinforce oral hygiene instructions
      - Review healthy diet
    - **Yes**
      - Extra-Oral Swelling?
        - **Yes**
          - EMERGENCY: Consult dentist immediately
          - Consider antibiotics
          - If systemic signs (i.e. fever, malaise, trismus, not eating) or approaching eye or concern for airway, refer to ED for immediate medical management and consider antibiotics
        - **No**
          - Intra-Oral Swelling/Abscess?
            - **Yes**
              - Refer to dentist ASAP
              - Consider antibiotics
              - If extra-oral swelling develops refer to ED
            - **No**
              - Extra-Oral Swelling?
                - **Yes**
                  - Refer to dentist
                  - Apply fluoride varnish
                  - Reinforce oral hygiene and good diet
                - **No**

- **No**
  - Extra-Oral Swelling?
    - **Yes**
      - Refer to dentist ASAP
      - Consider antibiotics
      - If extra-oral swelling develops refer to ED
    - **No**
      - Intra-Oral Swelling/Abscess?
        - **Yes**
          - Refer to dentist ASAP
          - Consider antibiotics
          - If extra-oral swelling develops refer to ED
        - **No**
          - Refer to dentist
          - Apply fluoride varnish
          - Reinforce oral hygiene and good diet

#### Low Risk
- **Yes**
  - **Yes**
    - Refer to dentist
    - Apply fluoride varnish
    - Reinforce oral hygiene and good diet
  - **No**
    - Reinforce good oral hygiene
    - Regular dental visits
    - Review healthy diet

For urgent issues, or to speak with the specialist on call 24/7, call the Physician Priority Link at 1-888-636-7997.